THE NINTH ANNUAL REPORT

of the

DEPARTMENT *of* ANESTHESIOLOGY

1966

THE NEW YORK HOSPITAL-CORNELL MEDICAL CENTER
525 EAST 68TH STREET, NEW YORK, NEW YORK

THE NINTH ANNUAL REPORT

of the

DEPARTMENT *of* ANESTHESIOLOGY

1966

THE NEW YORK HOSPITAL-CORNELL MEDICAL CENTER
525 EAST 68TH STREET, NEW YORK, NEW YORK

THE NINTH ANNUAL REPORT — 1966

of the

DEPARTMENT OF ANESTHESIOLOGY

by Joseph F. Artusio, Jr., M.D.

To the President of the Board of Governors of the Society of The New York Hospital:

The year 1966 was one of progress, as indicated by further increase in the size of our attending staff of anesthesiologists and stability in the number of our postgraduate fellows. The present ratio between attending staff and postgraduate students is greater than 1 to 1. This provides a personal and varied clinical and didactic experience for our postgraduate students.

Although the actual number of anesthetics administered decreased this year, the patient care and graduate training continued to remain excellent.

The manpower problem in anesthesiology is still acute. Funds from the Federal Government for clinical training of the postgraduate student were not provided this year, but they definitely are expected for the fiscal year beginning in July 1967. The Federal aid program should help us attract postgraduate students who wish to become anesthesiologists and who have been in other types of practice for four or more years. These funds would enable us to increase the number of our postgraduate students over and above those whom we presently train under the existing table of organization.

Our attending staff continues to participate actively in meetings for anesthesiologists throughout the country.

The medical school preceptorship program was inaugurated this year. This was an effort by the American Society of Anesthesiologists to acquaint medical students with the specialty of anesthesiology at an early period in their education. During the summer months, we have trained four students, all of whom had finished two years of medical school. During an eight-week program, these students became acquainted with the functions of the anesthesiologist in this great medical center. Funds for this program were matching in type, the American Society of Anesthesiologists providing 50% of the cost and the Joint Administrative Board providing the other 50%. A detailed report of this program appears later in this report. We were highly satisfied with the result and plan to continue it in future years. It was a most rewarding experience for the students and for ourselves.

It is indeed pleasant to report that we now have some funds to begin our visiting professorship program. The first visiting professor will not be invited until 1967. However, plans for his visit are now being formulated. This should be an extremely profitable program. As you know, last year I expressed my support for this type of visiting professor arrangement. Having been a visiting professor many times in other medical schools, I feel that such a program is most stimulating to all concerned.

STAFF

My associates in the administration of this department have been:

Benjamin E. Marbury, M.D., Attending Anesthesiologist	January 1949
Marjorie J. Topkins, M.D., Associate Attending Anesthesiologist	July 1952
Alan Van Poznak, M.D., Associate Attending Anesthesiologist	February 1958
Herbert Erlanger, M.D., Assistant Attending Anesthesiologist	June 1957
George R. Monahan, M.D., Assistant Attending Anesthesiologist	July 1960
Jerold Schwartz, M.D., Assistant Attending Anesthesiologist	October 1961
Ann Huston, M.D., Assistant Attending Anesthesiologist	January 1962
Raymond G. Barile, M.D., Assistant Attending Anesthesiologist	July 1963
Louis J. Maggio, M.D., Assistant Attending Anesthesiologist	July 1963 — Defense Service Roll
Patricia O'Neil, M.D., Assistant Attending Anesthesiologist	July 1963–May 1966
Barnett J. Junker, M.D., Assistant Attending Anesthesiologist	October 1963
Alexander Gotta, M.D., Assistant Attending Anesthesiologist	July 1964 — Defense Service Roll
Dragan Borovac, M.D., Assistant Attending Anesthesiologist	July 1964
Peter W. T. Yu, M.D., Assistant Attending Anesthesiologist	July 1964
Aileen Kass, M.D., Assistant Attending Anesthesiologist	July 1965
David Susman, M.D., Assistant Attending Anesthesiologist	July 1965
Leslie Balazs, M.D., Assistant Attending Anesthesiologist	July 1966
Judith Weingram, M.D., Assistant Attending Anesthesiologist	July 1966
Leibert Turner, M.D., Assistant Attending Anesthesiologist	October 1966

During 1966, twenty attending anesthesiologists assisted me in providing the anesthesia service for this institution. Again this year, there was an increase in attending anesthesiologists, thus making the attending staff the largest in the history of the department. During this year, two of our attending anesthesiologists joined the armed forces and were placed on our Defense Service Roll. They were Dr. Alexander Gotta and Dr. Louis Maggio, both now serving their country in Viet Nam. Dr. Patricia O'Neil resigned as an assistant attending anesthesiologist as her husband relocated his practice in the vicinity of Boston, Massachusetts. Dr. O'Neil had completed her residency in this department and was an attending anesthesiologist; we were indeed sorry to see her leave The New York Hospital. Dr. Leibert Turner, who had completed his residency at this institution in 1964, served in the armed forces and has now become an assistant attending anesthesiologist.

The resident staff appointments in anesthesiology for the year 1966 are as follows:

ANESTHESIOLOGIST (1)

Leslie Balazs, M.D.	September 1, 1964 – June 30, 1966
Elizabeth Frost, M.D.	July 1, 1964 – June 30, 1966
Manon Manahan, M.D.	July 15, 1964 – June 30, 1966
Judith Weingram, M.D.	July 1, 1964 – June 30, 1966
George W. Allgair, M.D.	July 1, 1965
Janet Allgair, M.D.	July 1, 1965
Alegria Bahia, M.D.	July 1, 1965
Gabriel Curtis, M.D.	July 1, 1965
Mary Chua, M.D.	July 1, 1965 – June 30, 1966 resigned
Nadine Hradsky, M.D.	July 1, 1965 – November 1, 1966 resigned
Yung Jai Sohn, M.D.	July 1, 1965

ASSISTANT ANESTHESIOLOGIST (1)

Michel Costes, M.D.	July 1, 1966
Bienhard Hou, M.D.	October 1, 1966
Parvin Javadi, M.D.	July 1, 1966
Mohammed Radmanesh, M.D.	January 1, 1966
Sirivan Ratanarat, M.D.	July 1, 1966

Seventeen postgraduate students were trained in anesthesiology this year. Dr. Leslie Balazs, Dr. Elizabeth Frost, Dr. Manon Manahan and Dr. Judith Weingram all completed their residencies during this year. Dr. Leslie Balazs and Dr. Judith Weingram remained in this department and became assistant attending anesthesiologists. Dr. Manon Manahan became a third-year postgraduate student at the Jewish Hospital of Brooklyn and is continuing her training. Dr. Elizabeth Frost became an assistant attending anesthesiologist at the Albert Einstein College of Medicine in this city.

Five new postgraduate students arrived for our training program. Dr. Michel Costes, from Ecole de Medecine de Paris, Paris, France; Dr. Bienhard Hou, National Taiwan University, Taiwan; Dr. Parvin Javadi, Pahlavi Medical School, Iran; Dr. Sirivan Ratanarat, Siriraj Hospital Medical School, Thailand; and Dr. Mohammed Radmanesh, Medical School of Esphan, in Iran. Their training has progressed according to schedule. Each of our postgraduate students has done well.

NURSE ANESTHETISTS — MARJORIE J. TOPKINS, M.D. in charge

Nurse anesthetists for the year 1966 are are follows:

SARA MULLIN, Senior Nurse Anesthetist . . .	September 1932
JOSEPHINE CAHILL, Senior Nurse Anesthetist . .	November 1943
ETHEL KOVAR, Senior Nurse Anesthetist . . .	November 1944
GRAYCE EVELETH, Staff Nurse Anesthetist . . .	November 1935
MAUREEN MAXFIELD, Staff Nurse Anesthetist . .	February 1958
ELIZABETH DAVIS, Staff Nurse Anesthetist . . .	February 1958
CONSUELA HANSEN, Staff Nurse Anesthetist . .	November 1958 — Resigned June 1966
CAROLE WHITE, Staff Nurse Anesthetist . . .	March 1963
GEORGETTE GABRIEL, Staff Nurse Anesthetist . .	August 1964
MARY KUCEWICZ, Staff Nurse Anesthetist . . .	March 1965
ANITA AMUNATEQUI, Staff Nurse Anesthetist . .	June 1966
BLANCHE LEWIS, Staff Nurse Anesthetist . . .	August 1966

During 1966 this department had the smallest change in nurse anesthetist personnel. Eleven nurses administered anesthesia in 1966; and eleven administered anesthesia in 1965. There was one resignation and two nurses employed during the year.

The functions of the nurse anesthetist remain unchanged in this department. The ever increasing need for anesthesia during surgery, obstetrics, and for diagnostic procedures in the many clinics of this hospital make the work of this group both vital and imperative. Without them too, the postgraduate training of physicians in the specialty of anesthesiology, so uniquely developed in this hospital, could not be accomplished.

CLINICAL FUNCTIONS OF THE DEPARTMENT —
BENJAMIN E. MARBURY, M.D. in charge

During the year 1966, there has been considerable reduction in the total number of anesthetics administered. The greatest decrease was noted in anesthesias administered to obstetrical patients. The total number of anesthesias for general surgery also decreased by 574. Anesthesias for gynecological surgery increased slightly. The role of the anesthesiologist as a consultant to all

clinical departments has increased in 1966. The anesthesiologist's role in assisting in postoperative patient management in the recovery room area and in the fields of inhalation therapy, acid-base balance, and pain relief have been significant. His knowledge of the physiology of respiration and in the use of ventilators has made him an important consultant in ventilatory care on all types of patients. The anesthesiologist will continue to increase his role in total patient care, in contrast with years gone by, when his duties were confined to the operating rooms. His duties now carry him well out of the operating room to all of the departments in the institution to aid in total patient care. His knowledge of pain, his ability to delineate pain pathways and to diagnose and treat pain are being used throughout the institution.

The department was most active in clinical research this year. Dr. Topkins has continued her study of the patients with myocardial infarctions. This study which previously included only males over 50 years of age, has now been extended to include female patients. Dr. Weingram and I, assisted by Dr. Sohn of the graduate group, continued to study the drug, teflurane, as a useful clinical anesthetic.

RESIDENCY TRAINING

A very important part of our day's work is involved in continuing training of our postgraduate students. All of our teaching is done by the seminar method, the didactic lecture rarely being used. The resident anesthesiologists are given their assignments approximately a month before the scheduled date of the seminar. It is mandatory that each resident prepare the material himself. He is given a very wide bibliography from which to choose his reading material and then is expected to come to the seminar well informed on the subject. The seminar is a true discussion session. The attending anesthesiologist determines whether the graduate student has grasped the most important aspects of the day's assignments and adds to this knowledge from his own experience. It is in these sessions of give and take between students and mentors that the graduate student's body of knowledge is added to on a daily basis. The graduate student gets as much out of the program as he puts into it, so that a major portion of his training is essentially his responsibility. The professors are available to guide, to direct and to determine the order and pace of the graduate student's learning. Each anesthetic record of each graduate student is reviewed monthly by Dr. Artusio. By this method he guides the training at the clinical level, points out errors, offers suggestions as to the cause of events during a particular procedure, insures well-rounded clinical training, and establishes personal contact with each graduate student.

Each day the resident's clinical training is supervised by attending anesthesiologists. Together they plan the anesthetic management and attempt to anticipate problems that may be met during the surgical procedure. Throughout the day, a specific attending anesthesioligist is available to aid, answer questions in times of difficulty, and be of general assistance to residents. This type of supervision by experienced mentors is provided for our graduate students 24 hours a day.

MEDICAL STUDENTS

Teaching of medical students continues in the second, third and fourth years. Dr. Van Poznak has been extremely active this year in helping with the teaching of medical students in the Department of Pharmacology. In the third and fourth years, our program continues to give the student some insight into anesthesia by demonstrations of anesthetic techniques. A significant portion of our time is devoted to student teaching.

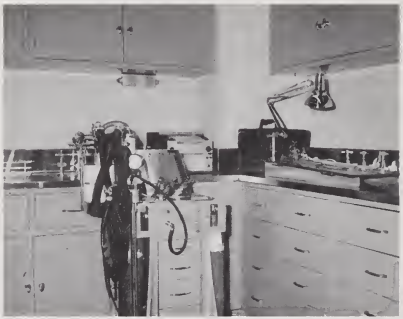
Through the combined cooperation of the American Society of Anesthesiologists and New York Hospital–Cornell Joint Administrative Board, funds were provided for the inauguration of the Anesthesiology Preceptorship Program in 1966. An eight-week fellowship was offered to students who had completed two years of medical school and were interested in an experience in this specialty.

The preceptees last summer were Robert Kohler, Scott McDougal and Jack Waxman of Cornell Medical College and Alan Spielvogel of Albert Einstein Medical School. The eight weeks were spent observing and participating in the preoperative, operative and postoperative management of our clinical cases, with special emphasis on the care of the acutely ill, management of the unconscious patient, artificial ventilation, intubation, closed chest massage and defibrillation technique. The preceptee participated in our resident teaching sessions and also worked in the research laboratory with Dr. Van Poznak.

Follow-up interviews with the students disclosed that the program had been extremely successful. They developed increased knowledge of and insight into anesthesiology. They also developed skills which they will be able to use in their medical careers. The students for the 1967 program applied because this year's preceptees felt that the program was a richly rewarding experience. We believe that this program has offered an excellent opportunity for medical students to have some contact with anesthesiology in their early and formative years. Much of the results of this program will be intangible and the long-range benefit to total patient care may not be seen for several years.

INSTRUMENTATION AND RESEARCH FUNCTION —

ALAN VAN POZNAK, M.D. in charge



The motor nerve terminal preparation of Riker and his associates has been the subject of the major share of our research effort during 1966. This preparation is a sensitive model by means of which synaptic effects of many drugs can be demonstrated. We have concentrated on the inhalation anesthetics, and have quantitated the effects of methoxyflurane, teflurane, and cyclopropane on motor nerve endings. The findings paralleled the clinical experiences with these drugs, both in order of potency and time-action curves.

This work has enabled us not only to show that certain inhalation anesthetics have previously suspected profound actions in the periphery, but also to provide additional evidence to support the idea that this model is an indication of what is happening to nerve endings within the central nervous system.

Although most of our activity concerned investigation of the depressant drugs, we also have been interested in the drugs which can be used to increase neural activity — the so-called analeptics — and have begun a study of such

drugs as caffeine and the amphetamines on the motor nerve terminal. Preliminary results suggest that nerve endings are stimulated by these drugs.

We have had a great deal of interest and enthusiastic assistance from our medical students during the past year. The second-year students who participated in the summer preceptorship program spent time in the laboratory and performed several successful experiments. These included Scott McDougal, Robert Kohler, Jack Waxman and Alan Spielvogel. Fourth year students who have worked in the laboratory include Joseph Bohan, Charles Nicolosi and George Uhran. We are grateful for the skilled technical assistance of Dalton Chiscolm, Dr. Frank Standaert's technician, who has worked with us on weekends during the year.

Our interest in halogenated anesthetics continues. Tetrafluorobromethane (teflurane) has undergone considerable clinical trial, but certain laboratory studies are still in progress. We have established a group of chronic cats which will be used to assess the efficacy of beta-adrenergic blocking drugs in preventing cardiac arrhythmias seen during teflurane anesthesia. We have also begun work in evaluating the asymmetrical tetrafluoroethane, which is of research interest as a proposed anesthetic of intermediate potency.

We have received Federal support for our neuromuscular studies, and support from Abbott Laboratories for our research in halogenated anesthetics. For both, we are grateful. However, our space is far too small to accommodate all the projects in which we are engaged, and we look forward to the completion of the Harkness Building, in which we have been assigned five laboratories. It is our hope that this space will permit us not only to pursue our investigational work more effectively, but also to establish a training program in anesthesia research so that residents and fellows may gain experience in this area of investigation. We hope that a few of these people will be stimulated to embark on anesthesia projects of their own.

RECORDS AND STATISTICS

Chart No. 1 — Total of the primary anesthetics in this department decreased by 1525 during the year as compared with 1965. In spite of the decrease in number of total anesthetics, the number of non-flammable anesthetics used as primary anesthetics increased by almost 2000, thus further reducing the number of explosive anesthetics given in the institution. All other parameters remained approximately the same as last year's except for a decrease in 400 local anesthetics given for general surgical procedures.

Chart No. II — Methods of inductions and techniques of administration changed little during the past year. All parameters were almost identical.

Chart No. III — Surgery by regions did not significantly change during the year. Approximately the same percentage of each type of surgery was accomplished during 1966.

Chart No. IV — The resident anesthesiologist administered about 25% of the anesthetics given in this institution, and this has been adequate for a well rounded training program.

Chart V (a) — Cardiac arrests and massage within the immediate anesthesia period indicates that the number of cardiac arrests decreased by 1/3 this year. Only one individual in this group was considered to be physical status 1 according to the American Society of Anesthesiologists classification. This ten-year old child incurred sudden hyperpyrexia of unknown origin and could not be resuscitated in the immediate postoperative period. This appears to be part of a new syndrome that is being seen throughout the country and is not related to inadequate ventilation. We all are still quite baffled as to the cause of this sudden episode of hyperpyrexia. Of the six patients suffering cardiac arrest, only two were resuscitated without sequalae. All patients were resuscitated immediately, but four succumbed in the post-operative period. The three-year-old child who was undergoing cleft palate surgery under anesthesia with an insufflation endotracheal ether technique was among those who were not completely resuscitated.

Chart V (b) — Vascular complications within seven days post-anesthesia. Almost the same number of myocardial infarctions occurred during this year as did in 1965. None of the patients who had a post-operative myocardial infarction were considered as physical status 1 in the preanesthetic evaluation. Various types of anesthesia were used and there was no similarity in the surgical procedures. In only one instance was the duration of anesthesia less than one hour. In most cases the anesthesia lasted from one hour and 30 minutes to 4 hours and 15 minutes. One third of the patients succumbed to the myocardial infarction and two thirds were improved. By far the vast majority of postoperative myocardial infarcts occurred on the first postoperative day. During the seven-day postoperative period, other than the first day peak, the sixth day appears to be another time in which there is a high incidence of myocardial infarctions. All patients were over the age of 50 and a vast majority were in the 70 to 80 age group. One third of the patients who had a myocardial infarction gave a history of a previous infarction. One third of

the patients who sustained myocardial infarction had gall bladder and biliary tract surgery.

Chart V (c) — There was a 33% increase in pulmonary complications within 4 postoperative days, but only one patient succumbed. A vast majority of these patients were considered physical status 1 or 2, in contrast to those who sustained cardiac arrest or myocardial infarction, among whom there were none in physical status 1. None of the patients who developed a post-operative atelectasis or pneumonia had an operative procedure occupying less than two hours duration, and most were under surgery for 3, 4, 5 or more hours. These patients were predominantly in the 60-70 age group. Only three patients younger than 30 developed a postoperative pneumonia.

Department of Anesthesiology

General Surgery — GYN — Obstetrics

Cyclopropane	4,366	
Fluothane	4,060	
Methoxyflurane	3,065	
Nitrous Oxide	2,668	
Ether, semi-closed circle	523	
Spinal, single shot	139	
Ether, open	98	
Teflurane	57	
Regional block for surgery	31	
Thiopental sodium, intravenous	17	
Vinethene	6	
Epidural and caudal	2	
Thiopental sodium, rectal	2	15,034

General anesthesia for therapeutic procedures:		
Thiopental sodium, electroshock	138	
Thiopental sodium, electroconversion	57	195
		15,229

Miscellaneous		
Locals, O.R. for surgery	3,037	
Locals, clinic	440	
Blocks, O.R. and Clinic Therapeutic and diagnostic)	19	3,496
		18,725

Private patients	11,225	
Pavilion patients	7,500	18,725

CHART I — Annual Summary — Primary Anesthetics

Department of Anesthesiology

General Surgery — GYN — Obstetrics

Methods of induction to primary anesthesia

Thiopental sodium induction, intravenous	9,691
Brevital inductions	114
Vinethene inductions	7
Thiopental sodium, rectal	6

Induction and maintenance with same anesthetic

Nitrous Oxide induction to Nitrous Oxide maintenance	2,272
Cyclopropane induction to Cyclopropane maintenance	239
Ether induction to Ether maintenance	122

Technics

Closed circle CO_2 absorption	7,435
Semi-closed circle CO_2 absorption	7,024
Infant circle $C0_2$ absorption	263
Open mask method	103
Mechanical ventilator	14
Non-rebreathing valve	4

Special technics

Arfonad (controlled hypotension)		27
Cardio-pulmonary bypass (heart & neurosurgery)		71
Generalized hypothermia (tub or blanket)		285
Local hypothermia (ice packs)		25

Endotracheal intubation

Nasoendotracheal	144	
Oroendotracheal	5,574	5,718

Neuromuscular blocking agents

d'Tubocurarine only	195	
Succinylcholine only	6,274	
Both used	513	
Flaxedil only	46	7,028

CHART II — Annual Summary — Methods of Induction — Technics — Special Drugs

ANESTHESIOLOGY DEPARTMENT

Summary of cases — includes General, Spinal and Block Anesthesias

Head and Neck	
ENT (by region	661
Eye	491
Dental	180
Face	152
Thyroid	130
Neck	149
Head, superficial	8
Intracranial	289
Esophagoscopy / Bronchoscopy	47
	2,107
Thorax	
Great vessels	13
Mitral valvulotomy (closed)	13
Cardiac-pulmonary bypass	65
Misc. heart surgery	28
Intrapleural	199
Thorax, superficial	435
Thoracic cage	5
Shoulder	21
	779
Upper abdomen	
Stomach-duodenum	247
Biliary tract	564
Retroperitoneal	72
Colon	350
Pancreas	20
Spleen	22
Renal	174
Portal	5
Close evisceration	9
	1,463
Lower abdomen	
Appendix	227
Bowel, small	114
OB, vaginal delivery	3,103
GYN, abdominal surgery	777
Urology, abdominal	325
Caesarean section	228
Abdominoperineal	35
Abdominal aorta & vessels	98
Ventral hernia	55
	4,962
Abdominal wall	
Extraperitoneal	4
Hernia, ing. fem. umb.	655
Lumbar sympathectomy	20
Abdomen, superficial	48
Burns, 10% body	1
	728
Perineal	
GU perineal (TUR & Cysto)	1,329
Ano-rectal	229
Perineal GYN (D&C, etc.)	2,250
Vaginal hysterectomy	111
	3,919
Spine	
Column	123
Cord	30
Back, pilonidal, etc.	75
	228
Limbs	
Upper bone	58
Upper soft	222
Lower bone	264
Lower soft	292
	836
Grand total anesthesias	15,034
Grand total operations	15,022
Anesthesia — no operation	12

CHART III

ANESTHESIOLOGY DEPARTMENT

Summary of RESIDENT Anesthesiologists' cases
Includes General, Spinal and Block Anesthesias

Head and Neck	
ENT (by region)	239
Eye	123
Dental	101
Face	35
Thyroid	48
Neck	45
Head, superficial	1
Intracranial	107
Esophagoscopy / Bronchoscopy	27
	726
Thorax	
Great vessels	8
Mitral valvulotomy (closed)	11
Cardiac-pulmonary bypass	64
Misc. heart surgery	24
Intrapleural	97
Thorax, superficial	73
Thoracic cage	2
Shoulder	5
	284
Upper abdomen	
Stomach-duodenum	109
Biliary tract	219
Retroperitoneal	29
Colon	101
Pancreas	5
Spleen	14
Renal	69
Portal	2
Close evisceration	3
	551
Lower abdomen	
Appendix	86
Bowel, small	35
OB, vaginal delivery	215
GYN, abdominal surgery	160
Urology, abdominal	60
Caesarean section	61
Abdominoperineal	13
Abdominal aorta & vessels	26
Ventral hernia	24
	680
Abdominal wall	
Extraperitoneal	2
Hernia, ing. fem. umb.	169
Lumbar sympathectomy	13
Abdomen, superficial	16
Burns, 10% body	1
	201
Perineal	
GU perineal (TUR & Cysto)	267
Ano-rectal	54
Perineal GYN (D&C, etc.)	419
Vaginal hysterectomy	26
	766
Spine	
Column	35
Cord	12
Back, pilonidal, etc.	23
	70
Limbs	
Upper bone	21
Upper soft	60
Lower bone	133
Lower soft	96
	310
Grand total anesthesias	3,596
Grand total operations	3,588
Anesthesia — no operation	8

CHART IV

Age	*Physical Status*	*Agent*	*Technic*	*Relaxant*	*Diagnosis Operation*	*Anes. ind. to arrest*	*Complication*	*Result*
10 yrs.	1	Fluothane	S. Closed Endotr.	Anectine	Strabismus Bilateral medial recession	1 hr. 30 min.	Cardiac arrest O.R. Hyperpyrexia	Cardiac resus. Death
76	2	Fluothane	S. Closed Endotr.	Anectine	BPH. ASCVD. Congestive heart failure, Digitalized Status iliac artery resection TURP	2 hr 5 min.	Cardiac arrest O.R.	Success resus; no sequelae
79	4	Penthrane	Closed	Anectine	Subcapital fracture L. hip ASCVD. Congestive heart failure Proposed hip pinning. Op. cancelled	22 min.	Cardiac arrest O.R.	Success resus. O.R. Death 24th po.
27	2	Cyclo Ether	S. Closed Endotr.	Curare	Perforated duodenal ulcer Plication perforated duodenal ulcer	1 hr. 45 min.	Cardiac arrest O.R.	Success resus. O.R. Death 13th po. day
44	3	Ether	S. Closed Endotr.	Anectine	Diabetic retinopathy Hypophysectomy	1 hr. 45 min.	Cardiac arrest O.R.	Success resus; no sequelae
3½ yrs.	2	Ether	Insufflat. Endotr.	— —	Cleft palate. Status cleft palate repair. Cleft palate repair	1 hr. 20 min.	Cardiac arrest O.R.	Cardiac resus. Death

CHART V — (a) — Cardiac arrests and massage within immediate anesthesia period. (Patients in extremis and those for cardiac surgery excluded)

Age	*Physical Status*	*Agent*	*Technic*	*Relaxant*	*Diagnosis Operation*	*Anes. time*	*Complication*	*Result*
86	5	Procaine	Local	— —	Ca rectum ¢ metastases ASCVD Liver biopsy	1 hr. 10 min.	Myocardial infarct 2nd po day	Death 2nd po
54	3E	Cyclo	Closed Endotr.	Anectine	Acute pancreatitis. ASCVD Exp. lap., cholecystectomy	3 hr. 40 min.	Myocardial infarct 1st po day	Death 3rd po
78	3	Tetracaine	Spinal	— —	Gangrene rt. foot. Diabetes mellitus ASCVD Amputation rt. leg below knee	1 hr. 45 min.	Myocardial infarct 3rd po day	Improved
66	4	Cyclo	Closed Endotr.	Anectine	Expanding abd. arteriosclerotic aneurysm aorta. Gen. ASCVD Resection aneurysm,bypass graft	3 hr. 35 min.	Myocardial infarct 5th po day	Improved
76	3E	1. Penthrane	Closed Endotr.	— —	BPH. ASCVD, postCVA 2 years 1. TURP, vas ligation	3 hr. 20 min.	Po hemorrhage after 1st op. Myocardial infarct	Improved
		2. Halothane	S. Closed	— —	2. Cystotomy & lig. bleeding prostate bed	1 hr. 40 min.	after 2nd op.	
83	2	Xylocaine Pentothal	Local I.V.	— —	Benign gastric polyp.— lung disease Bilroth I, partial gastrectomy	3 hr.	Myocardial infarct 6th po day	Improved
70	3	Cyclo	Closed Endotr.	Anectine Curare	CVD ¢ severe angina; prior MI Cholecystitis & cholelithiasis Cholecystectomy, CD exploration	1 hr. 50 min.	Myocardial infarct 1st po day	Improved
78	3	Penthrane	Closed Endotr.	Anectine	Intertrochanteric fracture l. hip. Chr. congestive heart failure Jewett nailing l. hip	2 hr. 40 min.	Myocardial infarct 1st po day	Improved
56	2	Cyclo	Closed Endotr.	Anectine	Chr. cholecystitis & cholelithiasis Cholecystectomy	3 hr. 5 min.	Myocardial infarct 4th po day	Improved

CHART V (b) — Vascular complications within 7 day post anesthesia period.

Age	*Physical Status*	*Agent*	*Technic*	*Relaxant*	*Diagnosis Operation*	*Anes. time*	*Complication*	*Result*
67	3	Halothane	S. Closed Endotr.	— —	L. ureteral calculus. Paralytic ileus. Hypertension. BP 220/90 Cystoscopy & retrograde pyelogram	1 hr. 15 min.	Myocardial infarct during anesthesia	Improved
61	4E	Cyclo	Closed Endotr.	Anectine	Acute cholecystitis, Severe ASCVD Myocardial infarct, previous x 2 Cholecystectomy	1 hr. 30 min.	Myocardial infarct 1st & 17th po days	Improved
93	3	Halothane	S. Closed Endotr.	— —	Ca rectosigmoid ¢ metastases ASCVD ¢ failure — Old MI Transverse colostomy	1 hr. 10 min.	Myocardial infarct 7th po day	Death 9th po
68	3	Cyclo	S. Closed Endotr.	Anectine	Chr. cholecystitis, cholelithiasis ASCVD ¢ hx. MI 2 years previous	1 hr. 55 min.	Myocardial infarct 1st po day	Death 1st po
80	3	Penthrane	Closed	— —	Fracture rt. hip. Diabetes mellitus Seizure disorder. CV disease Closed reduction ¢ Jewett nailing	1 hr. 30 min.	Myocardial infarct 6th po day	Improved
70	3	Local Halothane	S. Closed	— —	Bil. ing. hernia. Diabetes mellitus ASCVD. Previous angina and CVA Repair bilat. inguinal hernia	3 hr. 5 min.	Myocardial infarct 1st po day	Death 1st po
52	4E	Penthrane	Closed Endotr.	Anectine	Diabetes mellitus ¢ retinopathy Chronic meningitis ¢ communicating hydrocephalus. Ventricular atrial shunt	2 hr. 5 min.	Myocardial infarct 4th po day	Death 6th po
67	3	Cyclo	Closed Endotr.	Anectine	Ca colon. Previous MI & CHF Right colectomy	4 hr. 15 min.	Myocardial infarct 1st po day	Improved
65	3	Halothane	S. Closed Endotr.	Anectine	Hemorrhoids, ASCVD-Hx MI x 3 Hemorrhoidectomy	50 min.	Myocardial infarct 1st po day	Improved

CHART V (b) — Vascular complications within 7 day post anesthesia period.

Age	*Physical Status*	*Agent*	*Technic*	*Relaxant*	*Diagnosis Operation*	*Anes. time*	*Complication*	*Result*
77	3	Ether	S. Closed Endotr.	Anectine Curare	Ca. sigmoid. Chr. bronchitis ASCVD — BP 170/70 Sigmoid resection	2 hr. 40 min.	Pneumonia RLL 5th po day	Improved
49	1E	Cyclo	Closed Endotr.	Anectine	Subacute cholecystitis Cholecystectomy & drainage	2 hr. 35 min.	Pneumonia, RUL 1st po day	Improved
62	2	Cyclo	Closed Endotr.	Anectine	Pyloric canal ulcer. Chronic cholecystitis & cholelithiasis. Subtotal gastrectomy and cholecystectomy.	4 hr. 20 min.	Pneumonia, LLL 2nd po day	Improved
7 yr.	3	Ether	S. Closed Endotr.	Anectine	Congenital spherocytosis Splenectomy	3 hr.	Atelectasis, RLL 2nd po day	Improved
67	3E	Cyclo	Closed Endotr.	— —	Left femoral hernia Left femoral hernioplasty	3 hr. 20 min.	Pneumonia, RUL 1st po day	Improved
23	3	Cyclo	Closed Endotr.	Anectine	Thalassemia, hypersplenism Splenectomy, bx. liver	4 hr. 25 min.	Pneumonia, LLL 1st po day	Improved
52	1	Cyclo	Closed Endotr.	Anectine	Rt. inguinal hernia Rt. inguinal hernioplasty	2 hr. 15 min.	Pneumonia, RLL 2nd po day	Improved
85	2	Penthrane	Closed Endotr.	— —	Intertrochanteric fract. L. hip Jewett nailing hip, open fixation	2 hr. 20 min.	Pneumonia, LLL 1st po day	Improved
58	2	1. Penthrane 2. Cyclo	Closed Closed Endotr.	Anectine Anectine	Hashimoto's thyroiditis. Rheumatoid arthritis. Hepatic artery aneurysm. 1. Subtotal thyroidectomy 2. Resection LLL liver	2 hr. 3 hr.	Bleeding aneurysm Pneumonia, RLL 3rd day po 1st op.	Improved
28	2	Cyclo	Closed Endotr.	Anectine	Ulcerative colitis Subtotal colectomy & drainage	5 hr. 45 min.	Pneumonia, LLL 4th po day	Improved

CHART V (c) — Pulmonary complications within 4 day post anesthesia period.

ANESTHESIOLOGY CLASSIFICATION OF COMPLICATIONS

Age	*Physical Status*	*Agent*	*Technic*	*Relaxant*	*Diagnosis Operation*	*Anes. time*	*Complication*	*Result*
41	2	Cyclo	Closed Endotr.	Anectine	Chronic cholecystitis with adenomyoma of gall bladder. Cholecystectomy	2 hr. 45 min.	Atelectasis, RLL 1st po day	Improved
77	4	Cyclo	Closed Endotr.	Anectine	Arteriosclerosis obliterans ASCVD — BP 190/80 Left lumbar sympathectomy	4 hr. 30 min.	Pneumonia, RUL 2nd po day	Improved
28	1	Cyclo	Closed Endotr.	Anectine	Chronic cholecystitis and cholelithiasis. Cholecystectomy	3 hr. 20 min.	Pneumonia, RLL 1st po day	Improved
62	1	Cyclo	Closed Endotr.	Anectine	Choledocholithiasis Diabetes mellitus Choledochotomy and exploration	4 hr. 30 min.	Pneumonitis, RUL 1st po day	Improved
38	3	Cyclo	Closed Endotr.	Anectine	Ventral hernia. Chronic bronchitis Obesity Ventral hernia repair	2 hr. 40 min.	Atelectasis Pneumonia, RLL 1st po day	Improved
63	3	Cyclo	Closed Endotr.	Anectine	Gastric ulcer, diabetes mellitus ASCVD — BP 210/110 Radical subtotal gastrectomy	6 hr.	Pneumonia, RLL 2nd po day	Improved
66	3	Cyclo	Closed Endoth.	Anectine Curare	Gastric ulcer. Emphysema and chronic bronchitis. Diabetes. Total gastrectomy.	8 hr. 15 min.	Pneumonia, RML 2nd po day	Improved
63	2	Cyclo	Closed Endotr.	Anectine	Ventral hernia. Laennec's cirrhosis Ventral hernioplasty	3 hr. 20 min.	Pneumonia, RLL 2nd po day	Improved

CHART V (c) — Pulmonary complications within 4 day post anesthesia period.

Age	*Physical Status*	*Agent*	*Technic*	*Relaxant*	*Diagnosis Operation*	*Anes. time*	*Complication*	*Result*
45	2	Penthrane	Closed Endotr.	Anectine	Ca. of bladder and urethra Ant. pelvic exenteration, ileal conduit and gastrostomy	8 hr. 45 min.	Pneumonia, RLL 3rd po day	Improved
75	2	Ether	S. Closed Endotr.	Anectine	Chronic duodenal ulcer chronic bronchitis & emphysema Subtotal gastrectomy & vagotomy	6 hr. 30 min.	Pneumonia, LLL 1st po day	Improved
69	2	Cyclo	Closed Endotr.	Anectine	Ca. cecum ¢ ca. secondary mesentary Status post abd-perineal resection. Right hemi-colectomy and transverse colostomy.	3 hr. 45 min.	Pneumonia, RLL 3rd po day	Improved
67	3E	Cyclo	Closed Endotr.	Anectine	Duodenal ulcer. Status post partial gastrectomy ¢ retention. Exp. lap., lysis of adhesions	2 hr. 20 min.	Aspiration pneumonia 1st po day	Improved
70	2E	Cyclo	Closed Endotr.	Anectine	Ruptured ovarian cyst 2° to endometriosis. Exc. ovarian cyst & right ovary	3 hr. 5 min.	Pneumonia, RLL 3rd po day	Improved
57	3	Fluothane	S. Closed Endotr.	Anectine	Severe rheumatoid pulmonary disease ¢ fibrosis. Possible pulm. tbc. Perforated gastric ulcer Exc. & plication perf. gastric ulcer	2hr. 30 min.	Pulmonary insufficiency 1st po day	Death
44	2E	Cyclo	Closed Endotr.	Anectine	Bleeding duodenal ulcer Partial gastrectomy	7 hr. 10 min.	Atelectasis Pneumonia, RLL 3rd po day	Improved
42	1	Penthrane	Closed Endotr.	Anectine	Chronic duodenal ulcer Subtotal gastrectomy	5 hr. 5 min.	Pneumonia, RLL 2nd po day	Improved

CHART V (c) — Pulmonary complications within 4 day post anesthesia period.

CLOSING COMMENTS

This 1966 Annual Report indicates that the department continues to move toward true academic excellence in a university department of anesthesiology. Progress is slow but sure and I believe this report will be another milestone in the development of this department.

Joseph F. Artusio, Jr., M.D.
Professor of Anesthesiology in Surgery
Anesthesiologist-in-Chief

PUBLICATIONS

Joseph F. Artusio, Jr., M.D.

The Eighth Annual Report of the Department of Anesthesiology — 1965 — NYH — CUMC 1966.

The Clinical Signs of Methoxyflurane Anesthesia, Excerpta Medica Foundation, 1966.

How to Choose and Anesthetic. Chp. in DRUGS of CHOICE 1966 Edit. Modell, W., Editor, C. V. Mosby Company.

with White, J. M., Medical Education and Anesthesia. Clinical Anesthesia. Vol. 1, 1966. F. A. Davis Company, Philadelphia.

with Foldes, F. F., Muscle Relaxants. Clinical Anesthesia. Vol. 2. 1966. F. A. Davis Company. Philadelphia.

with Benson, D. W., Clinical Anesthesia for the Surgical Specialties. Clinical Anesthesia. Vol. 3. 1966. F. A. Davis Company, Philadelphia.

Alan Van Poznak, M.D.

Liver Function. Excerpta Medica Foundation. 1966